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ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024				
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AHMED, SALMAN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/722,638

Applicant(s)

STUMPERT, MARTIN

Examiner

SALMAN AHMED

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/26/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-10 and 15-18 are pending.

Claims 1-10 and 15-18 are rejected.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 7-10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al. (US PAT PUB 2002/0169883, hereinafter Bright) in view of Easley (US PAT PUB 2007/0093245).

In regards to claim 1, Bright teaches a method of routing a connectivity plane message to a mobile terminal (Figure 1 MS 119) which can be reached via two or more network nodes, of a first type (paragraph 0033, an MS 119 communications with an ANSI base site system 121 comprised of a plurality (i.e. two or more network nodes) of base stations distributed throughout a plurality of coverage areas), comprising the steps of: receiving information, information being associated with the network node of a second type (paragraph 0059, call delivery originated in GSM), by a network node of a second type to which the mobile terminal is attached (paragraph 0059, an IAM including a called party number (PN) is sent to a GSM GMSC, which sends routing information to the GSM HLR 401 of the MP HLR 101); based on the information, determining the

network node of the first type via which the connectivity plane message is to be routed to the mobile terminal; designating a roaming number based on a preferred routing using the positional information and determined network node of the first type to which the connectivity plane message is routed (columns 0059-0060, the GSM HLR 401 determines the VMSC type for the called party. When the type is not GSM, the GSM HLR relays a provide roaming number messages with the GMSC address and type to the mediation device 405. The mediation device 405 stores the GMSC address and type, converts the provide roaming number message to a location request with the GMSC ID equal to the mediation device (MD), and sends the message to the ANSI HLR 403. The ANSI HLR sends a route request message to the ANSI VMSC with an MSC ID of MD indicating the mediation device 405. The ANSI VMSC sends an ACK including a TLDN (i.e. roaming number) to the ANSI HLR 403, which relays an ACK with a TLDN, to the mediation device 405. A PRN ACK with an MSRN (i.e. roaming number), is relayed to the GSM HLR); sending the roaming number by the network node of the second type; and routing the connectivity plane message to the mobile terminal via the preferred routing of the roaming number (paragraph 0060, a PRN ACK with an MSRN is relayed to the GSM HLR, which generates a SRI ACK including the MSRN or FTN and the IAM with the MSRN is relayed from the GSM GMSC to the ANSI VMSC processing to the mobile station).

Bright does not explicitly teach IAM containing positional information, indicating the geographical location of the mobile terminal and routing information, the routing information being associated with the attached network node.

Easley in the same field of endeavor teaches the routing includes use of the Initial Address Message (IAM) in the Integrated Services Digital Network User Part (ISUP) of the SS7 protocol. The IAM includes at least Laura's MIN and/or MDN (i.e. routing information), and may include a point code or other identifier for the MSC 20 (i.e. positional information, indicating the geographical location) serving Laura's wireless unit 24 (paragraph 0059).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the steps of IAM containing positional information, indicating the geographical location of the mobile terminal and routing information, the routing information being associated with the attached network node as suggested by Fasley. The motivation is that, inclusion of such information enables the routing system to reliably and efficiently ascertain the correct routing parameters that needs to be used for successful routing; thus enabling successful routing process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 8, Bright does not explicitly teach positional information being received separately from the routing information.

Easley in the same field of endeavor teaches positional information being received separately from the routing information (paragraph 0059, MIN and/or MDN (i.e. routing information), being received in an separate field element of IAM message from a

point code or other identifier for the MSC 20 (i.e. positional information, indicating the geographical location) serving Laura's wireless unit 24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the steps of positional information being received separately from the routing information as suggested by Easley. The motivation is that by concretely defining different message elements within a message, a clear and precise routing and positional information can be conveyed to routing elements; thus enabling a successful parsing and decoding of routing and positional parameters.

In regards to claim 10, Bright teaches a method of controlling the routing of a connectivity plane message to a mobile terminal (Figures 1 MS 119) which can be reached via two or more network nodes of a first type and which is attached to a network node of a second type (paragraph 0033, an MS 119 communications with an ANSI base site system 121 comprised of a plurality (i.e. two or more network nodes) of base stations distributed throughout a plurality of coverage areas), comprising the steps of: receiving a request for routing information; generating information, by the network node of a second type to which the mobile terminal is attached and transmitting a roaming number providing a preferred routing using the information and a determined network node of the first type to which the connectivity plane message is to be routed (columns 0059-0060, an IAM including a called party number (PN) is sent to a GSM GMSC, which sends routing information to the GSM HLR 401 of the MP HLR 101. The GSM HLR 401 determines the VMSC type for the called party. When the type is not

GSM, the GSM HLR relays a provide roaming number messages with the GMSC address and type to the mediation device 405. The mediation device 405 stores the GMSC address and type, converts the provide roaming number message to a location request with the GMSC ID equal to the mediation device (MD), and sends the message to the ANSI HLR 403. The ANSI HLR sends a route request message to the ANSI VMSC with an MSC ID of MD indicating the mediation device 405. The ANSI VMSC sends an ACK including a TLDN (i.e. roaming number) to the ANSI HLR 403, which relays an ACK with a TLDN, to the mediation device 405. A PRN ACK with an MSRN (i.e. roaming number), is relayed to the GSM HLR. a PRN ACK with an MSRN is relayed to the GSM HLR, which generates a SRI ACK including the MSRN or FTN and the IAM with the MSRN is relayed from the GSM GMSC to the ANSI VMSC processing to the mobile station)

Bright does not explicitly teach IAM containing positional information, indicating the geographical location of the mobile terminal and routing information associated with the network node of the second type to which the mobile terminal is attached.

Easley in the same field of endeavor teaches the routing includes use of the Initial Address Message (IAM) in the Integrated Services Digital Network User Part (ISUP) of the SS7 protocol. The IAM includes at least Laura's MIN and/or MDN (i.e. routing information), and may include a point code or other identifier for the MSC 20 (i.e. positional information, indicating the geographical location) serving Laura's wireless unit 24 (paragraph 0059).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the steps of IAM containing positional information, indicating the geographical location of the mobile terminal and routing information associated with the network node of the second type to which the mobile terminal is attached as suggested by Easley. The motivation is that, inclusion of such information enables the routing system to reliably and efficiently ascertain the correct routing parameters that needs to be used for successful routing; thus enabling successful routing process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 2, Bright teaches the information indicates the mobile terminal within an area served by the network node of the second type as described in the rejections of claim 1 above.

In regards to claim 2, Bright does not explicitly teach the positional information indicates the geographical location of the mobile terminal within an area served by a network node.

Easley in the same field of endeavor teaches the positional information indicates the geographical location of the mobile terminal within an area served by a network node (paragraph 0059, the routing includes use of the Initial Address Message (IAM) in the Integrated Services Digital Network User Part (ISUP) of the SS7 protocol. The IAM includes at least Laura's MIN and/or MDN, and may include a point code or other

identifier for the MSC 20 (i.e. positional information, indicating the geographical location) serving Laura's wireless unit 24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the steps of the positional information indicates the geographical location of the mobile terminal within an area served by a network node as suggested by Easley. The motivation is that, inclusion of such information enables the routing system to reliably and efficiently ascertain the correct routing parameters that needs to be used for successful routing; thus enabling successful routing process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 3, Bright teaches a network control plane message is routed via the determined network node of the first type to the network node of the second type (paragraphs 0059 and 0060).

In regards to claim 7, Bright teaches information being included in the routing information paragraphs (0059-0060).

Bright does not explicitly teach information being positional information.

Easley in the same field of endeavor teaches information being positional information (paragraph 0059, the routing includes use of the Initial Address Message (IAM) in the Integrated Services Digital Network User Part (ISUP) of the SS7 protocol. The IAM includes at least Laura's MIN and/or MDN, and may include a point code or

other identifier for the MSC 20 (i.e. positional information, indicating the geographical location) serving Laura's wireless unit 24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the steps of information being positional information as suggested by Easley. The motivation is that, inclusion of such information enables the routing system to reliably and efficiently ascertain the correct routing parameters that needs to be used for successful routing; thus enabling successful routing process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 9, Bright teaches the step of determining, based on the positional information, or receiving transmission information specifying the transmission regime via which the connectivity plane message is to be routed to the determined network node of the first type (paragraphs 0059-0060).

In regards to claim 18, Bright teaches network node of second type is a switching node with a fixed associated between a particular geographical service area and network node of second type (paragraph 0052, 0059 and 0060).

3. Claims 4-6 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright and Easley as applied to claim 1 above and further in view of Lin (US PAT PUB 2002/0196770).

In regards to claim 4, Bright teaches routing of the connectivity plane message is performed in a communications network that includes a first network portion and a second network portion having a monolithic architecture (Figure 1, network portions being 103 and 117).

Bright and Easley do not explicitly teach a network portion having split architecture.

In regards to claim 4, Lin teaches a network portion having split architecture (Figure 5, service area 513).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright and Easley's system/method the steps of a network portion having split architecture as suggested by Lin. The motivation is that (as suggested by Lin, paragraph 0030) such method provides very efficient distributed call processing and connection control functions, while appearing as a single entity; thus providing for call set-up with minimum and localized resources. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 5, Bright teaches network node of first type as described in the rejections of claim 1 and 4 above.

Bright and Easley do not explicitly teach a selected network node is arranged between the first network portion and the second network portion.

In regards to claim 5, Lin teaches the selected network node (CSIWF 515) of the a first type is arranged between the first network portion (Figure 5, service area 513) and the second network portion (Figure 5, PSTN 525).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright and Easley's system/method the steps of a selected network node of a first type is arranged between the first network portion and the second network portion as suggested by Lin. The motivation is that (as suggested by Lin, paragraph 0030) such method provides very efficient distributed call processing and connection control functions, while appearing as a single entity; thus providing for call set-up with minimum and localized resources. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 6, Bright teaches network node of first type as described in the rejections of claim 1 and 4 above.

Bright and Easley do not explicitly teach a network node of a first type is selected such that resources utilized by the routed connectivity plane message in a first network portion are minimized.

In regards to claim 6, Lin teaches a network node of the first type (CSIWF 515) is selected such that resources utilized by the routed connectivity plane message in a first network portion (Figure 5, service area 513) are minimized (section 0030, The present

invention provides for call set-up with minimum and localized resources as compared to previous methods).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright and Easley's system/method the steps of a network node of a first type is selected such that resources utilized by the routed connectivity plane message in a first network portion are minimized as suggested by Lin. The motivation is that (as suggested by Lin, paragraph 0030) such method provides very efficient distributed call processing and connection control functions, while appearing as a single entity; thus providing for call set-up with minimum and localized resources. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 16, Bright teaches network node of second type comprises a mobile switching center (MSC) node (paragraphs 0059-0060).

In regards to claim 17, Bright teaches network node of first type as described in the rejections of claim 1, 4 and 5 above.

Bright and Easley do not explicitly teach a node comprises a media gateway (MGW) node connecting two network portions.

In regards to claim 17, Lin teaches node of first type comprises a media gateway (MGW) node connecting two network portions (section 0024, The CSIWF 505 or 515 provides a signaling interface for signaling standards, such as ISUP

(ISDN user part) or TCAP (transaction capability protocol), over a network, such as an SS7 network available from Lucent Technologies, as well as a broadband signaling interface to the packet-based transport network. The CSIWF 505 or 515 manages connections in the network and performs narrowband/broadband signaling interworking functions, i.e. it is a media gateway (MGW)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright and Easley's system/method the steps of a node comprises a media gateway (MGW) node connecting two network portions as suggested by Lin. The motivation is that media gateway helps desperate networks to seamlessly and reliably communicate with one another; thus enabling a robust communication network. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al. (US PAT PUB 2002/0169883, hereinafter Bright) in view of Ginter (US PAT 5579375).

In regards to claim 15, Bright teaches a network component (Figures 1, 2 or 4 Multi-protocol HLR 101) for controlling the routing of a connectivity plane message to a mobile terminal (Figure 1 MS 119 or MS 105) which can be reached via two or more network nodes (paragraphs 0032-0033, mobile subscriber unit or mobile station (MS)

105 communicates with a base station system (BSS) 107 comprised of a plurality of base stations distributed throughout a plurality of coverage areas; An MS 119 communicates with an ANSI base site system 121 comprised of a plurality (i.e. two or more network nodes) of base stations distributed throughout a plurality of coverage areas) and which is attached to the network component (figure 1, BSS 121 is attached to MP HLR 101 or MS is attached to MP HLR 101), comprising: a first interface (Figure 4, GSM HLR 401) for receiving a request for routing information (paragraph 0059, an IAM including a called party number (PN) is sent to a GSM GMSC, which sends routing information to the GSM HLR 401 of the MP HLR 101); a processing component (figure 4, Mediation Device) for generating positional information (paragraph 0059, Location Request message) associated with the network component to which the mobile terminal is attached (paragraph 0059, The MD may also convert messages. For example, the MD 405 may convert a Provide Roaming Number message to a Location Request message or a Routing Request message to a Send Routing Information message. When looking at conversion external to the MP HLR 101, the MP HLR 101 converts a Location Request message to a Provide Roaming Number message, and also converts a Send Routing Information message to a Routing Request message. The MP HLR 101 works with serving networks, i.e., networks where communication devices are currently registered, to update registration information, generate queries in response to requests, and route calls to users where they are located and in a manner that users access their communication devices, such as formatting profiles and messages according to the serving or terminating network's protocol), the processing component

designating a roaming number based on a preferred routing using the geographical location of the mobile terminal and the network component to which the mobile terminal is attached and to which the connectivity plane message is routed; (paragraph 0059, The MP HLR 101 routes a call according to the protocol of the infrastructure device to which the call is directed. The mediation device 405 stores the GMSC address and type, converts the provide roaming number message to a location request with the GMSC ID equal to the mediation device (MD), The ANSI VMSC sends an ACK including a TLDN or busy ACK to the ANSI HLR 403, which relays an ACK with a TLDN, absent, or busy to the mediation device 405. A PRN ACK with an MSRN (i.e. designating a roaming number), absent, or busy is relayed to the GSM HLR); and a second interface (figure 4, ANSI HLR 403) for transmitting the roaming number to enable a receiving network switch to determine the network node via which the connectivity plane message is to be routed to the mobile terminal (paragraph 0059-0060 the GSM HLR 401 determines the VMSC type for the called party. When the type is GSM, normal GSM termination is provided. When the type is not GSM, the GSM HLR relays a provide roaming number messages with the GMSC address and type to the mediation device 405. The mediation device 405 stores the GMSC address and type, converts the provide roaming number message to a location request with the GMSC ID equal to the mediation device (MD), and sends the message to the ANSI HLR 403. [0060] The ANSI HLR sends a route request message to the ANSI VMSC with an MSC ID of MD indicating the mediation device 405. The ANSI VMSC sends an ACK including a TLDN or busy ACK to the ANSI HLR 403, which relays an ACK with a TLDN, absent,

or busy to the mediation device 405. A PRN ACK with an MSRN, absent, or busy is relayed to the GSM HLR, which generates a SRI ACK including the MSRN or FTN and the IAM with the MSRN is relayed from the GSM GMSC to the ANSI VMSC processing to the mobile station).

Bright does not explicitly teach, Location Request message indicating the geographical location of the mobile terminal and routing information.

Ginter in the same field of endeavor teaches Location Request message indicating the geographical location (Figure 7, MSCID) of the mobile terminal (PC_SSN and routing information (Figure 7, Digits (dialed) and PC_SSN (MSC-N or MSC-C)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Bright's system/method the teachings of Location Request message indicating the geographical location of the mobile terminal and routing information as suggested by Ginter. The motivation is that, inclusion of such information enables the routing system to reliably and efficiently ascertain the correct attached location and routing parameters that needs to be used for successful routing; thus enabling successful routing process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Response to Arguments

5. Applicant's arguments see pages 6-9 of the Remarks section, filed 6/26/2008, with respect to the rejections of the claims have been fully considered and are moot in view of new ground of rejections.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Salman Ahmed/

Examiner, Art Unit 2619